

**Claims**

1. Method for the production of a fancy yarn, in which an effect configuration is predetermined and data is generated therefrom, which represents the selected effect configuration, and in which spinning adjustments are generated based on this data, characterised in that once it has been formed in a spinning device, the fancy yarn is guided through a sensor mechanism, and at least one of the parameters, diameter and mass of the fancy yarn is continuously measured by means of the sensor mechanism in that the measured values are evaluated and the effect configuration of the yarn produced is determined therefrom and is compared with the predetermined effect configuration and in that the spinning adjustments are changed until an adequate correspondence is achieved between the predetermined effect configuration and the effect configuration of the yarn produced.
2. Method according to claim 1, characterised in that the spinning adjustments included in the comparison process, which, apart from the directly effect-related data, which fluctuate with the changing transverse dimension of the yarn, also contain further data relating to the basic adjustment of the spinning machine, such as the rotor speed, opening roller speed and selection of the spinning means.
3. Method according to claim 2, characterised in that on conclusion of the comparison process, the spinning adjustments are stored on a storage medium for renewed production of the fancy yarn.

4. Method according to any one of claims 1 to 3, characterised in that the data is provided with addresses and is addressed to the control units (22, 25, 35, 45, 46) provided, in each case, for the corresponding control operations.

5. Method according to claim 1, characterised in that the effect region is determined in that the beginning of the effect is defined by meeting a first criterion and in that the end of the effect is defined by meeting a second criterion, in that an ascertainable number of largest measured values is determined between the beginning and the end of the effect, in that an average value is formed from the determined measured values, which represents the transverse dimension of the effect, and in that the effect length is determined from the beginning and end of the effect.

6. Method according to claim 5, characterised in that the transverse dimension of the web  $D_{ST}$  is determined in order to determine the relative transverse dimension of the effects.

7. Method according to claim 5 or 6, characterised in that, to determine the transverse dimension of the web  $D_{ST}$ , an arithmetic average value of the transverse dimension of the yarn is firstly formed from a predetermined length of yarn, as the reference, in that the reference value is subtracted from the individual values of the transverse dimension of the yarn, and in that the transverse dimension of the web  $D_{ST}$  is then formed as the arithmetic average value from all the negative values which were measured adjacent to other negative values.

8. Method according to any one of claims 5, 6 or 7, characterised in that the transverse dimension  $D_E$  of the effect is formed as the average value from the four largest transverse dimensions between the beginning and end of the effect.

9. Method according to any one of claims 5 to 8, characterised in that, considered as the first criterion, is the exceeding of a limit value of the transverse dimension  $D_{GR}$ , which is greater by a defined amount than the transverse dimension of the web  $D_{ST}$ , and in that the exceeding lasts over a predetermined yarn length  $L_{V1}$  and in that, considered as the second criterion, is the falling below of the limit value  $D_{GR}$  and that the falling below lasts over a predetermined yarn length  $L_{V2}$ .

10. Method according to claim 9, characterised in that the limit value  $D_{GR}$  is 15% greater than the transverse dimension of the web  $D_{ST}$ .

11. Method according to claim 9 or 10, characterised in that the predetermined yarn length is assumed to have been reached when the criterion is met over six consecutive measured values.

12. Method according to any one of claims 5 to 11, characterised in that when measuring the transverse dimension of the web, a measured value is detected every two millimetres.

13. Method according to any one of claims 1 to 12, characterised in that the change to achieve an adequate

correspondence between the predetermined effect formation and the effect formation of the yarn produced takes place as a control process, which is assisted by the use of control algorithms and empirically determined spinning adjustments in table form.